REMARKS

In the present application, claims 1, 4, 7-9, 11-27, and 29 are pending. Claims 1, 4, 8, 9, 11-14, and 29 are rejected, and claims 7 and 15-17 are objected to in the present Office Action. Claims 18-27 are allowed. Claim 29 is amended to recite limitations of claims 1 and 7. In view of the foregoing amendment and following remarks, Applicant respectfully requests reconsideration of the application.

Rejection under 35 USC §103

In paragraph 2, page 4 of the Office Action, the Examiner rejected claims 1, 5-6, and 11-13, under 35 USC §103 as being obvious over *Dye* (U.S. Patent No. 6,108,014). Applicant respectfully traverse. Examiner should note that claims 5 and 6 have been previously cancelled.

Claim 1 recites "... the first bounding box surrounding at least one source operand for the first graphics primitive..." Applicant points out that the definition of a source operand is "sets of pixel locations that each primitive *reads* in order to complete its drawing operation" (see page 15, lines 3-4). Because this is the definition of the term "source operand," Applicant does not believe this feature needs to be recited in claim 1.

In contrast to a source operand, a destination operand is defined as "the set of pixel locations where each primitive *will draw* its graphics upon completion" (see page 15, lines 5-7). Applicant contends that *Dye* does not contemplate a bounding box about sets of pixel locations which are read (i.e., the source operand), nor the determination of "whether the first bounding box (surrounding at least one source operand) and the second bounding box overlap wherein a dependency is detected ..."

Examiner argues that "in order to determine destination bounding boxes source bounding boxes must somehow be generated by the hardware component." Applicant respectfully disagrees. While it may be contemplated that there be source operands in order to have destination operands, it is not inherent that a bounding box be generated about these source operand in order to determine a destination bounding box, as the Examiner contends.

Further referring to Examiner's arguments on page 4 of the office action, Examiner states "each window workspace area on the screen is deciphered to be represented in X, Y, Z coordinate space. And, Dye suggest that each object or bounding box is represented in X, Y, Z space. Hence, a bounding box is [intrinsically] surrounding each window workspace area *on the screen* where triangles representing the [sic] each object or bounding box *will be rendered*." In other words, the bounding box surrounds triangles (e.g., sets of pixels) where the triangles *will be drawn*. Thus, the bounding box of *Dye*, according to Examiner's own argument, only refers to a destination bounding box.

Additionally, the specification of *Dye* inherently describes comparison of similar types of bounding boxes because each bounding box is described in the same space. Thus, according to the Examiner's arguments, *Dye* only contemplates comparison of destination bounding boxes with other destination bounding boxes.

Even if one were to assume that source bounding boxes must somehow be generated by hardware components in order to determine destination bounding boxes (which Applicant traverses), there is no discussion, suggestion, or motivation in *Dye* to determine whether a source bounding box overlaps with a destination bounding box.

In fact, *Dye* never discloses comparison of source bounding boxes, nor even contemplates source bounding boxes. Further, it would not have been

obvious to one skilled in the art to contemplate the use of source bounding boxes in the context of *Dye*. As such claim 1 is not obvious in view of *Dye*.

Regarding claim 11, the claim recites "comparing a set of destination pixel locations of the first graphics primitive with at least one set of *source pixel locations* of the second graphics primitive." As discussed above with respect to claim 1, *Dye* does not disclose comparison of source pixel locations (e.g., source operand) with destination pixel locations (e.g., destination operand).

The Examiner argues that "the source operand characterizes the Z memory or Z values of X, Y area of box 1 or 2 as implied to [sic] in the depiction at col. 67, lines 15-23." This reference in *Dye* states "memory is allocated for the Z values for the X, Y area..." if an intersection occurs. However if no intersection occurs, "memory is not allocated for Z values" (col. 67, lines 13-14). Thus, the use of Z values and Z memory are not even contemplated until an intersection is already detected. It is nonsensical that a memory that is not considered until an intersection is already detected be used to determine if there is an intersection (i.e., dependency). As such, the source operand does not characterize the Z memory or Z values as contemplated by the Examiner. Additionally as discussed above, a source operand is defined as sets of pixel locations that each primitive *reads* in order to complete its drawing operation. Therefore, claim 11 is not obvious in view of *Dye*.

Claims 12 and 13 depend from claim 11. As such, claims 12 and 13 are allowable for the same reasons as claim 11.

In paragraph 3 of the office action, the Examiner rejected claims 4, 8-9, and 29 under 5 USC §103 as being obvious over *Dye* (U.S. Patent No. 6,108,014) in view of *Battle* (U.S. Patent No. 6,417,848). Applicant respectfully traverses.

With respect to claim 4, *Battle* does not overcome the deficiencies of *Dye* with regards to claim 1. That is, *Battle* does not contemplate having "the first bounding box surrounding at least one source operand" and "determining whether the first bounding box and the second bounding box overlap..." As such, claim 4 is not obvious over the prior art.

Claim 8 recites in part determining whether a *"write after write dependency"* exists between a first set of destination pixels (or corresponding bounding box) and a second set of destination pixels (or corresponding bounding box). The Examiner contends that *Battle* teaches determining a write after write dependency. However, the section referred to by the Examiner merely states that a "clusterizer should create clusters which are free from processing hazards such as write-after-write hazards." There is no discussion of how a write-after-write hazard is determined. As such, claim 8 is not obvious over *Dye* in view of *Battle*.

Claim 9 depends from claim 8, and is not obvious for the same reasons.

Claim 29 has been amended to recite the limitations of claims 1 and 7. Claim 7 is found to be allowable by the Examiner. As such, the rejection with regard to claim 29 is now moot.

Rejection under 35 USC §102(e)

In paragraph 4 starting on page 8 of the Office Action, the Examiner rejected claim 14 under 35 USC §102(e) as being anticipated by *Dye*. Specifically, the Examiner contends *Dye* comprises a destination reservation station, a source reservation station, and a first comparator. Applicant traverses.

Claim 14 recites "a source reservation station for storing a source bounding box location..." As previously discussed, *Dye*, according to the Examiner's arguments, only suggests destination bounding boxes and the comparison of the same. There is no mention of sourcing bounding boxes or a source reservation station for storing the sourcing bounding box location, nor is it inherent that *Dye* would have a source reservation station for storing the source bounding box location. Therefore, claim 14 is not anticipated by *Dye*.

Allowable Subject Matter

In paragraph 5 on page 9 of the Office Action, claims 18-27 are found to be allowable over the prior art.

Further in paragraph 6 on page 9, claims 7, and 15-17 are objected to be as being dependent upon rejected base claims. Claim 7 depends from claim 1 which Applicant contents is allowable. Claims 15-17 depend from claim 14 which Applicant believes is allowable. Claim 29 is amended to incorporate the limitations of claim 7 into claim 1, and is now in condition for allowance.

Conclusion

Based on the foregoing amendments to the claims and the above remarks, Applicant believes that the objections and rejections in the Office Action of March 1, 2004 are fully overcome, and that the application is in condition for allowance. If the Examiner has questions regarding the case, the Examiner is invited to contact Applicant's undersigned representative.

Respectfully submitted,

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Date: 6/1/04

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